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STATE WATER USE PLANS

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You asked for an overview of how Connecticut manages water allocation and recent legislation to create a state water use plan. You also asked for a summary of the process Massachusetts, New Hampshire, Pennsylvania, and Rhode Island underwent to create such plans, if applicable.

SUMMARY

Connecticut manages water quantity through regulating water diversion and other various programs. Primarily, three state agencies — the Department of Energy and Environmental Protection (DEEP), Department of Public Health (DPH), and the Office of Policy and Management (OPM) — administer state water resource laws. In 2001, the legislature created a Water Planning Council (WPC) to coordinate the activities of these agencies to address issues involving water utilities, water resources, and future water supply.

The law requires DEEP, DPH, and OPM to create a statewide long-range plan for managing water resources, but such a plan has not been created. Since 2010, two bills have been introduced to create a statewide water use plan or planning process, but neither passed.

The process by which Massachusetts, New Hampshire, Pennsylvania, and Rhode Island develop water use plans or manage water resources varies. Although Massachusetts does not have a comprehensive

statewide water use plan, the state has plans and programs for specific water management issues. New Hampshire has been developing a comprehensive water resources plan through the contributions of a statutory Water Resources Committee, agency actions, and a gubernatorial executive order. Pennsylvania created a statewide water use plan according to a statutorily-defined process. Rhode Island developed two complementary general water plan documents that address water deficiency and long-term planning. These states' processes generally involved some form of public input or involvement.

CONNECTICUT

Agency Roles

OPM is Connecticut's lead agency for state planning, which includes coordinating water resources policy, while DEEP and DPH regulate water supply and use.

OPM prepares the five-year State Conservation and Development Plan (Plan of C&D) ([CGS § 16a-24 et seq.](#)), which specifies development, resource management, and public investment policies. Among other things, the plan establishes policies to address developmental needs while protecting and preserving water resources such as stream and river corridors, aquifers, and Long Island Sound. Under the Plan of C&D, it is state policy to manage water resource conflicts by balancing competing needs of water. OPM uses it as a framework to evaluate plans and proposals submitted to it. By law, state funded projects must be consistent with the plan ([CGS § 16a-31](#)). (A public hearing on the [Draft 2013-2018 Conservation and Development Plan](#) has been held by the continuing Legislative Committee on State Planning and Development. The plan must be submitted to the legislature with the committee's recommendation for approval or disapproval. It will be effective when the legislature adopts it.)

DEEP administers most water resources and water quality laws, including the Water Diversion Policy Act ([CGS §§ 22a-365 through 22a-378](#)), which regulates activities that cause, allow, or result in the withdrawal from, alteration, modification, or diminution of water flow. [DEEP's Watershed Management Program](#) helps communities develop watershed-based plans. Further, in 2011 the legislature approved streamflow regulations — rules governing water release from dams and minimum water flows on classified streams — which DEEP administers.

DPH ensures the purity and adequacy of the state's drinking water by reviewing water supply plans submitted by certain water utilities. By law, these plans must show how the companies will meet projected water supply demands for five, 20, and 50 year planning periods ([CGS § 25-33d](#) and [Conn. Agency Regs. § 25-32d-1 through 6](#)). The state also has seven public water supply management areas, four of which have a Water Utility Coordinating Committee (WUCC). Each WUCC must assess water supply conditions and problems in their respective areas ([CGS §§ 25-33c and 25-33h](#)). DEEP's Public Utility Regulatory Authority (PURA) also regulates certain private water companies.

According to a [2011 OPM water resource management report](#), there is broad agreement that Connecticut's water allocation system needs improvement, but major changes will be expensive due to the cost of data collection, analysis, and modeling. The report cites a need for a comprehensive strategy to guide state agency actions that impact or depend on water resources.

Water Planning Council

In 2001, the legislature created the Water Planning Council (WPC) to address issues involving water companies, water resources, and the state's future drinking water supply ([PA 01-177](#)). The council is comprised of four members from three agencies: DEEP, DPH, and OPM.

[PA 01-177](#) required the WPC to study, among other things, water company management, water resource allocation, and future water needs. During its initial meetings, the WPC identified 26 action items, of which 12 have been completed. Many of the remaining items are ongoing. The WPC is required to report annually to the legislature.

In 2002, a WPC subcommittee on water resource allocation developed a Water Allocation Policy Planning Model (see below) which, along with the ongoing action items, serves as the foundation for the WPC's work plans. The [2002 report](#) discussing the model noted that "a water allocation plan will need high level support, adequate funding and identification of appropriate people to design and implement the Plan." It stated that "the process must start with a clear water resource management policy established by the State Legislature." The WPC reaffirmed its support of the model and this statement in its most recent [Annual Report](#).

Water Allocation Policy Planning Model

The WPC's Water Allocation Policy Planning Model (WAPPM) provides a framework for water allocation. The model is divided into three major sections: (1) high level planning; (2) legislative authorizations, policy decisions, and funding support; and (3) statewide basin screening. The basin screening process is further divided into six stages as follows:

1. developing an inventory and model for collecting data (by basin);
2. determining streamflow goals;
3. conducting basin planning through a public input process;
4. running the basin model;
5. making water apportionment recommendations that result in a document to allocate water resources in the basin; and
6. conducting permitting based on the water resources allocation document.

Attachment 1 is a flow chart of the WAPPM.

Long-range Plan for Managing Water Resources

By law, DEEP, DPH, and OPM must establish a continuing planning process and prepare and periodically update a statewide long-range water resources management plan ([CGS § 22a-352](#)). The plan must, among other things:

1. identify the water quantities and qualities that could be available to specific areas under feasible distribution;
2. identify current and future demands for water in specific areas;
3. recommend using the state's water resources, including surface and groundwater, for their greatest benefits; and
4. recommend land uses to ensure the desired water quantity and quality.

A plan has not been completed and the law does not provide a date by which it must be done.

Recent Legislative Proposals

Since 2010, two bills were introduced to create a statewide water use plan.

[SB 383](#) (2010) required the environmental protection and public health commissioners to consult with the WPC on developing a statewide water use plan. It required the commissioners to review and consider the findings and recommendations in certain WPC and DPH reports and water supply plans from water companies. The plan had to be submitted to the legislature's Environment and Public Health committees by January 1, 2012. The Environment and Public Health committees reported it favorably. The bill passed the Senate, but was not called for a vote in the House.

[HB 5518](#) (2011) required the WPC to develop and supervise the implementation of a structured, comprehensive approach for statewide water resource planning and allocation among water users. It specified that the approach would allow the WPC to identify stream flow goals, prioritize water apportionment, and oversee a water diversion permitting process. The Environment and Public Health committees favorably reported the bill, but the House did not vote on it.

WATER ALLOCATION MANAGEMENT IN OTHER STATES

Massachusetts

Although Massachusetts does not have a comprehensive statewide water use plan, the state has separate, but interrelated plans and programs for managing water resources. Some of the primary plans used to manage water resources and the process by which they were created are described below. Their development often involved collaboration among multiple state agencies such as the Executive Office of Energy and Environmental Affairs (EEA), the Department of Environmental Protection (DEP), and the Department of Conservation and Recreation.

In 2004, EEA convened a Water Policy Task Force to develop a water resource management policy. The task force established four major environmental principles: (1) keeping water local and seeking to have municipalities address issues from a watershed perspective, (2) protecting clean water and restoring impaired waters, (3) protecting and restoring fish and wildlife habitat, and (4) promoting development strategies consistent with sustainable water resources. It included representatives from environmental groups; industry; public works; and local, state, and federal governments and released the [Massachusetts](#)

[Water Policy](#) that same year. The policy recommends a partnership with local and regional stakeholders, protection of critical water resources, and streamlining certain regulatory and permitting processes.

In 2010, EEA, with support from state environmental agencies, created the [Sustainable Water Management Initiative](#) (SWMI) to develop and implement state water policy to support ecological and economic growth needs. An advisory committee and technical subcommittee comprised of various stakeholders advised EEA and the agencies on sustainable management of water resources to balance competing water needs. The major elements of SWMI include a safe yield (the maximum amount of allowed water withdrawal during drought conditions), seasonal streamflow criteria, and baseline reference points to aide in reviewing groundwater withdrawal requests. The SWMI framework was released in 2012 and, beginning in 2014, it will guide DEP's water withdrawal permitting under the state's [Water Management Act](#) program ([Mass. Gen. Laws. Ann. ch. 21G § 1 et seq.](#)).

Also in 2012, EEA and the state's Water Resources Commission released updated [Water Conservation Standards](#) which set statewide goals for water conservation and water use efficiency. The standards also guide effective conservation efforts to meet Massachusetts' Water Policy's statewide goals (see above).

New Hampshire

New Hampshire is currently developing a comprehensive statewide water resources plan, but its planning efforts began in 2003.

That year, the [legislature](#) established the Water Resources Committee (WRC) to study the state's water resources and report on future municipal water needs. The committee consisted of three members of both the House and Senate, appointed by legislative leadership. The committee was required to report its findings and recommendations annually to certain people including legislative leadership and the governor.

From 2004 through 2009, the New Hampshire Department of Environmental Services (DES), in conjunction with the WRC, received federal funds for preparing a statewide water plan. At the request of the WRC, DES completed several projects providing information and soliciting public input to develop the plan. To inform policy makers and the public about the state's water resources and the challenges in managing them, DES:

1. developed a [Water Resources Primer](#), which provides a descriptive overview of the state's water issues and preliminary recommendations, and
2. completed a [water supply versus demand analysis](#), which estimated water demand, consumptive use, withdrawal, and return flow for each Census block for the years 2005 and 2020.

To solicit public input and suggestions, it:

1. completed a [Statewide Survey of Policy Makers](#), which surveyed state legislators and local officials about various water issues, and
2. conducted public meetings to solicit comments and present the status of the plan's development.

DES held [16 public meetings](#) attended by at least 270 people. It reported its projects and results back to the WRC.

The statute establishing the WRC was [repealed](#) in 2010. However, in 2011, Governor Lynch issued an [executive order](#) creating the [Water Sustainability Commission](#) to (1) evaluate current water needs and the water needs for the next 25 years and (2) develop a long-term plan. He appointed 14 members to the commission, consisting of representatives from the public, state and local government, business and industry, and the environmental and conservation communities. The commission's work took 19 months, during which it held six public sessions, heard from approximately 500 people, listened to experts, and researched the efforts of other water-related commissions.

The commission issued its [final report](#) in December 2012. The report contained seven strategic goals including (1) increasing public knowledge of state water resources; (2) designing and implementing flexible and coordinated water management programs to ensure adequate quantity; and (3) integrating management plans at appropriate state, watershed, and sub-watershed levels. The commission recommended to the governor a "two-pronged initiative" to achieve these goals:

1. creating a Water Advisory Task Force to develop more specific mechanisms to advance water planning goals and
2. performing a multi-sector, 10-year, public engagement initiative to expand public understanding of and involvement in water resource management.

Pennsylvania

The 2009 [Pennsylvania State Water Plan](#) replaced an outdated 1983 plan. By law, the plan is intended to serve as a policy and guidance document for such things as (1) identifying and prioritizing water resources and water supply development projects, (2) providing information to decision makers about water availability, and (3) guiding policies on activities that impact water quantity and quality ([27 Pa. Cons. Stat. § 3116](#)).

The process to create the new plan began in 2001 with the state's [Department of Environmental Protection](#) (DEP) conducting a series of 16 water forums to solicit public comments about water resource management.

Input gathered at the public forums led to new legislation. The Water Resources Planning Act, signed in December 2002, established a Statewide Water Resources Committee and six Regional Water Resources Committees charged with guiding DEP through the development of a new State Water Plan, as well as updating it every five years ([27 Pa. Cons. Stat. § 3111 et seq.](#)).

Together, the statewide and regional committees consisted of 169 members. The statewide committee has 18 members appointed by the governor and legislative leadership, six ex-officio voting members representing state agencies, and seven ex-officio non-voting members representing two other state agencies and the five compact basin commissions. Regional committee members represent various environmental, industrial, academic, and governmental interests.

Developing the new plan involved over five years of data collection, analysis, and research. The statewide and regional water resources committees and DEP were required to hold public hearings and meetings in each region for public input. DEP, in consultation with the statewide committee, was required to prepare drafts of the regional plan components to be used in developing the state water plan. Regional plan components were required to include such things as water resource inventories and assessments of current and future water needs. Each regional committee then recommended a regional plan component, which had to be approved by a majority vote. DEP, in consultation with the statewide committee and considering the regional plans, prepared a draft of the statewide water plan, and was required to make it available for public comment ([27 Pa. Cons. Stat. § 3115](#)).

The statewide committee approved and recommended the plan in December 2008. The DEP secretary approved and adopted it in March 2009. Detailed information about the plan's implementation is available on the state's [water plan website](#).

Rhode Island

Rhode Island's two complementary statewide water use plans were created by separate entities: (1) the *2012 Strategic Plan* developed, by the [Water Resources Board](#) (WRB), and (2) "*Rhode Island Water 2030*" (*Water 2030*), developed by the [Division of Planning](#). *Water 2030*'s scope provides general goals and the *Strategic Plan* relates these broad goals to its specific programs and initiatives. When the plans were developed, the WRB was merged into the Division of Planning ([R.I. Gen. Laws § 42-11-10.1](#)), although the two bodies continue to maintain separate functions and goals.

2012 Strategic Plan. By law, the WRB must "regulate the proper development, protection, conservation and use of the water resources of the state" ([R.I. Gen. Laws § 46-15-1](#)). The WRB is comprised of 15 members, some of whom have specific, statutorily-defined expertise ([R.I. Gen. Laws § 46-15-1.2](#)). Historically, the WRB administered various specific, individual plans to regulate various water use issues. But the WRB decided to create a statewide strategic plan with short- and long-range water use goals. Consequently, it developed its [2012 Strategic Plan](#) to respond to particular deficiencies in the statewide water supply system.

Creating the plan involved calculations to determine the required water supply in certain areas. The WRB also studied historical rain patterns to identify water supply deficiencies. The process was conducted in the WRB's normal course of business, thus minimizing additional cost, but the WRB relied on previous water use studies it funded.

The WRB held advertised public stakeholder meetings with farmers, water suppliers, environmental groups, municipal planners, and others. Debate among the various interests represented on the board led to negotiation on possible solutions. The process culminated in the *Strategic Plan*, which the board adopted.

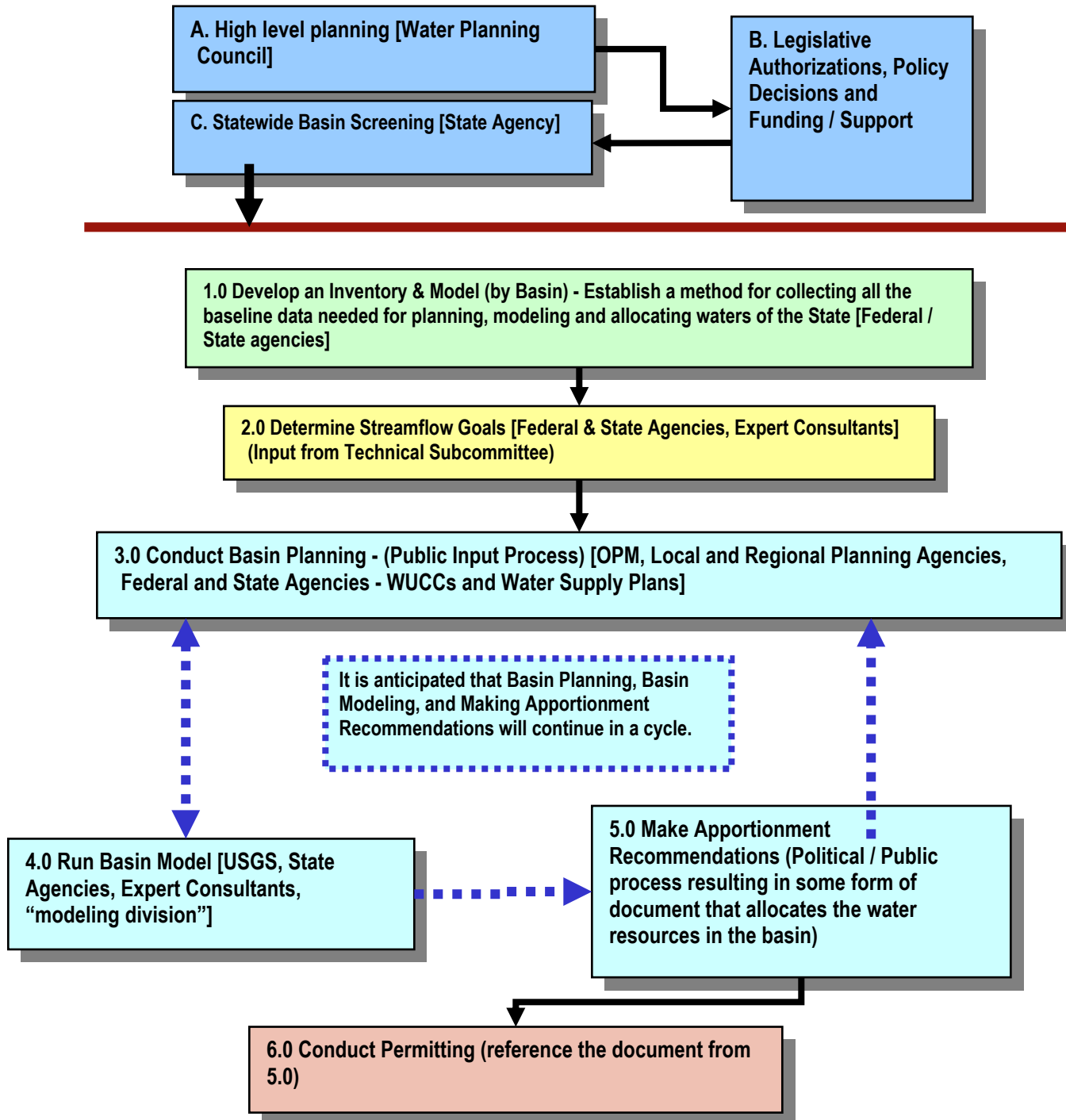
According to the WRB, implementing the plan has begun according to the plan's requirements and timeframe. The WRB intends to annually update the status of the plan's initiatives.

Rhode Island Water 2030. [“Rhode Island Water 2030”](#) (*Water 2030*) consolidated five previous State Guide Plan Elements dealing with issues affecting the demand for, supply, management, and protection of drinking water. It sets overall goals for state water use in the context of other statewide issues and goals for such things as the environment, transportation, and urban development.

Water 2030 involved many of the same people and stakeholders who contributed to the *Strategic Plan*. However, *Water 2030* was primarily created through an internal process at the Division of Planning. It will be updated every five to 10 years. The division develops similar general plans for all state agencies through its [Statewide Planning Program](#) ([R.I. Gen. Laws § 42-11-10](#)).

ATTACHMENT 1: WATER ALLOCATION POLICY PLANNING MODEL

Water Allocation Policy Planning Model



Rev. August 29, 2002

Source: Connecticut Water Planning Council, Water Resources Management Committee: Report of Subcommittee A (Water Allocation), September 9, 2002, p. v

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